

FOAM-GENERATING AQUEOUS COMPOSITIONS**Patent number:** FR2389668**Publication date:** 1978-12-01**Inventor:****Applicant:** RHONE POULENC IND (FR)**Classification:****- International:** C09K3/28; A62D1/00; A62D3/00; B01F3/04; B01F17/00;
E21F5/00**- european:** A62D1/00E; B01F17/00Z**Application number:** FR19770014309 19770504**Priority number(s):** FR19770014309 19770504**Also published as:**

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(54) FOAM-GENERATING AQUEOUS COMPOSITIONS

(71) We, RHONE-POULENC INDUSTRIES, a French Body Corporate of 22, Avenue Montaigne, 75 Paris 8eme, France, do hereby declare the invention for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:

5 The present invention relates to foam-generating aqueous compositions which can in particular be used in the prevention of fires, or in fire-fighting. 5

10 In the text which follows the compositions according to the invention will be described by the term "concentrated emulsifier". They are compositions which can, after dilution with water, generate a foam on stirring. The composition obtained by diluting the concentrated emulsifier with water will be referred to as "foaming mixture". 10

15 It is known that protective foams, whatever their application, such as for dust-combatting, decontamination of confined spaces, protection against fire or fire-fighting, must combine various properties such as a high expansion ratio, a high foam stability over a period of time, a high water retention, and the ability to leave, after settling out, a protective film on the treated medium, or on the treated carrier. Furthermore, the foaming composition from which the foams are produced must exhibit good storage stability under use conditions, for example good resistance to low temperatures. 15

20 Though numerous compositions containing a variety of constituents have been proposed, concentrated emulsifiers which generate a foam which possesses, to a high degree, all the above-mentioned properties are not yet available. In general, the compositions of the prior art contain water, a surface-active agent, a foam stabiliser and an additive which acts as an anti-freeze and facilitates dissolving the various constituents of the mixture in the aqueous phase. 20

25 There have now been found according to the present invention, concentrated aqueous compositions which generate particularly stable foams having a high water retention capacity and producing a protective film after settling out, which aqueous compositions comprise water, a foaming surface-active agent, a foam stabiliser and an additive acting as an anti-freeze and a co-solvent as well as a hetero-polysaccharide of high molecular weight which results from the fermentation of a carbohydrate under the action of bacteria of the genus *Xanthomonas*. 25

30 The present invention provides an aqueous composition which contains A) from 70% to 30% by weight of water and B) from 30% to 70% by weight of an organic mixture consisting of: 30

- 35 A) from 10 to 60% of surface-active agent
 B) from 1 to 10% and preferably from 2 to 8% of foam stabiliser
 C) from 20 to 60% of anti-freeze additive and
 D) from 1 to 30% of the hetero-polysaccharide. 35

40 The hetero-polysaccharides which are employed in the compositions of the invention are those which are obtained by fermentation of a great variety of carbohydrates (sugars and starches) under the action of bacteria of the genus *Xanthomonas*, for example the following species: *Xanthomonas campestris*, *Xanthomonas begoniae*, *Xanthomonas phaseoli*, *Xanthomonas heterae*, *Xanthomonas incanae*, *Xanthomonas carotae* or *Xanthomonas translucens*, 40
 45 or of the genus *Arthrobacter*, or of a yeast of the genus *Cryptococcus*, such as *Cryptococcus* 45